

APPENDIX D

Granulated Activated Carbon Vessel Breakthrough Monitoring

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Polychlorinated biphenyl (PCB) samples were collected from the granular activated carbon (GAC) vessels bi-weekly during construction season 2 (CS2), which extended from January to March 2014, to monitor for breakthrough in the lead GAC vessels. Samples were collected at the influent to the two 10,000-pound duplex GAC vessels, the effluent of each lead GAC vessel, and the effluent of each lag GAC vessel per Washington State Department of Ecology requirements. Breakthrough did not occur during CS2 and the GAC will continue to be used in future construction seasons at Boeing Plant 2. Table 1 shows sample results from CS2 and Figure 1 shows the layout of the GAC vessels with the sample ports labeled.

TABLE 1
PCB CONCENTRATIONS IN GAC TRACKING SAMPLES (µg/L)^{1,2}

Date	Inflow Before GAC Units	Sample Between A GAC Units	Sample After A GAC Units	Sample Between B GAC Units	Sample After B GAC Units
1/15/14	0.018	0.010 U	0.010 U	0.010 U	0.010 U
1/31/14	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
2/13/14	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
2/27/14	0.010 U	0.010 U	0.010 U	0.010 U	0.010 U
3/10/14	0.010 U	0.010 U	0.010 U	No samples were taken across the B GAC units since the system was operating at 50% capacity and all water was being treated through the A GAC units.	

Note(s)

1. PCB analysis via EPA 8082. Reported values are sum of all detected Aroclors.
2. U = Indicates that the target analyte was not detected at the reported concentration.

Abbreviation(s)

GAC = granular activated carbon
µg/L = micrograms/liter

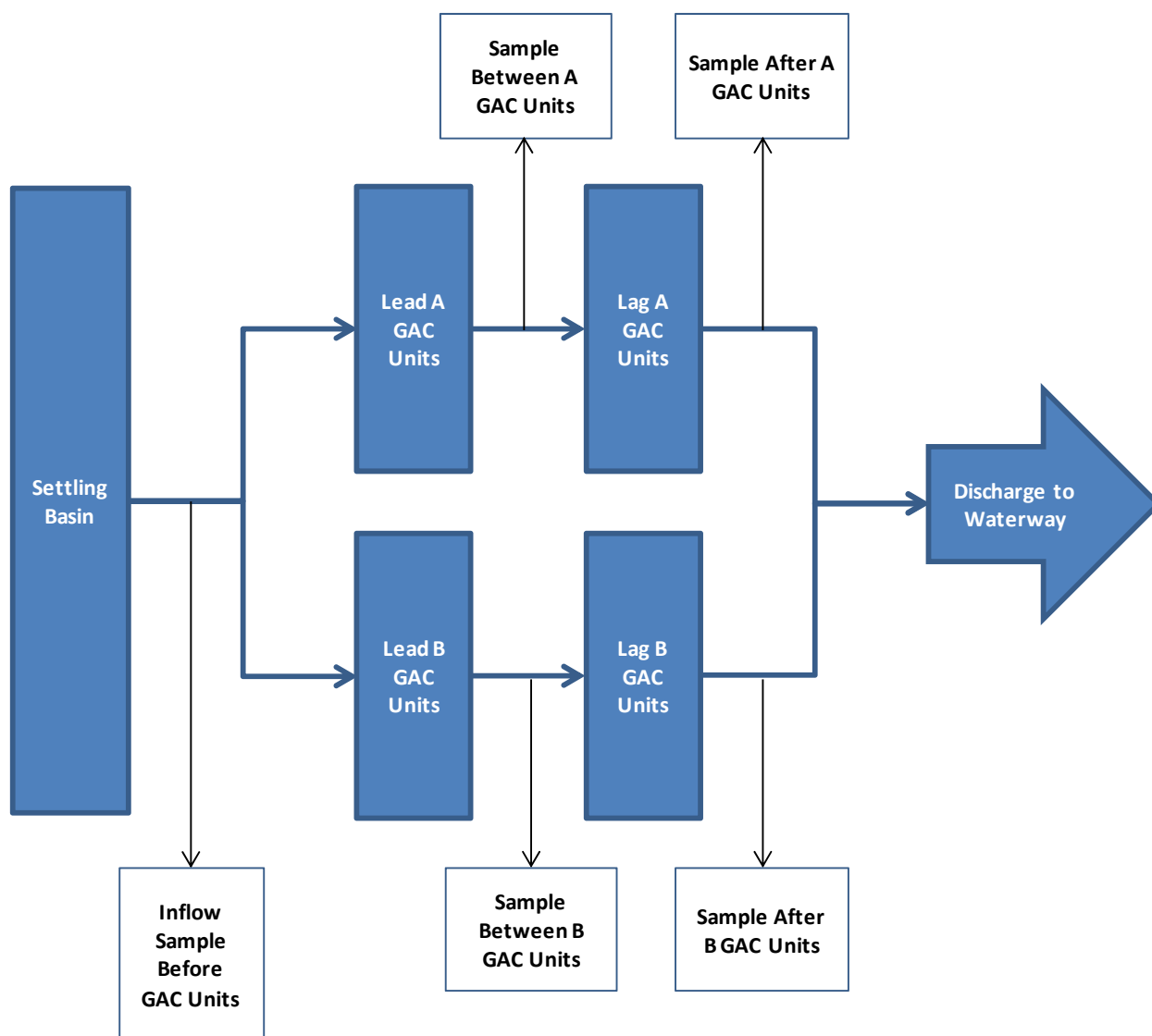


FIGURE 1 GAC SAMPLING SCHEMATIC